

NETWORKS

FAQ

Q Why can't I dial emergency service numbers from my VoIP phone?

A It's not so much that you can't dial the numbers as what happens when you dial them. A landline is permanently connected to a building. When you dial 999, the emergency services know exactly where you're calling from and the address to which the phone line belongs. In an emergency, where you may not have time to give your address, it makes it quicker and easier for the emergency services to get to you.

By their very nature VoIP services can be accessed from anywhere in the world, so the emergency services aren't sure where you are located.

VoIP service providers can provide access to emergency service numbers, but they have to tie your service to a fixed location and provide location information or you have to give your address when you dial 999.

Check with your service provider to see what it supports. If you can't dial 999, make sure you've got at least one phone connected to your landline.

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BILLION BiPAC 7402VGP

★★★★★

£138 inc VAT

Billion's BiPAC 7402VGP might not be the prettiest of wireless routers, but it's one of the most feature packed. As well as providing a way to share your ADSL connection via its built-in ADSL2+ modem, it also acts as a voice gateway for SIP-compliant VoIP services. The RJ45 ports on the rear allow you to connect a standard telephone, so you don't need to buy a VoIP phone.

First, you need to configure your router using the web-based management. A quick-start wizard shows you how to get your router connected to the internet. Unfortunately, it doesn't prompt you to change your wireless settings, so you're left with an insecure wireless network. Some settings are a little confusing. There's no simple option to choose to receive an IP address manually from your ISP. Instead, you have to enter the router's IP address as 0.0.0.0. While the onscreen messages make this clear, it wouldn't take much to make this interface a lot friendlier.

We found it easy enough to configure our wireless security settings. The BiPAC 7402VGP supports WEP and WPA-PSK encryption. Performance at close range was excellent, but throughputs dropped at range, which is a little disappointing.

To use the router for voice, some configuration is needed. Billion has a set of predefined services available, including Sipgate. If you're using one of these services, you need only provide your username and password. If you're not, you need to get the full network details of your provider. It can be overwhelming, and those who are unfamiliar with network settings are likely to struggle to configure it.



If you fancy yourself as something of a network wizard, there's a lot to like, and you'll find that the BiPAC is a powerful router. You can configure both the phone ports for different SIP accounts, or you can use the same for both. You can also connect your standard phone line to the router and configure the router to dial out on this line when you hit a prefix number, such as 9. This is useful if you need to dial emergency service numbers, which aren't always supported by VoIP services (see FAQ, left). It also means that your telephone will ring with incoming calls on both the VoIP line and your standard telephone.

The firewall is also advanced, allowing complete configuration. Those who like to define exactly which network traffic is allowed will love this router, but to us it feels more like a corporate product and it could prove confusing and difficult for the novice to configure.

If you know exactly what you're doing with network routers, Billion's BiPAC 7402VGP is one of the most advanced and configurable models around. However, for the novice user, its capabilities are probably a bit overwhelming.

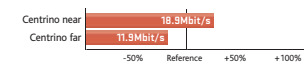
David Ludlow

SUMMARY

- ✓ Powerful voice options
- ✓ Very configurable router
- ✗ Overwhelming for novice users

WIRELESS ROUTER 802.11g wireless router (54Mbit/s), three-port Ethernet switch, ADSL2+ modem, two VoIP phone ports PART CODE BILWL010 SUPPLIER www.microwarehouse.co.uk DETAILS www.billion.uk.com

PERFORMANCE (see page 58)



Also consider...

BUFFALO AirStation G54 High Power

★★★★★

£44 inc VAT

BEST BUY Buffalo's High Power router uses brute force signal strength to give the fastest and longest wireless transmission we've seen. The router provides a speed boost to all devices on the network. The management interface is one of the easiest we've used, and the router is very well priced. This is an excellent choice.

802.11G WIRELESS ROUTER 125Mbit/s turbo mode, four-port Ethernet switch, AOSS PART CODE WHR-HP-G54 SUPPLIER http://uk.insight.com DETAILS www.inmac.co.uk

✓ Improves whole network performance ✗ No security prompt FULL REVIEW Dec 2005



US ROBOTICS Wireless MAXg ADSL2+ Gateway

★★★★★

£79 inc VAT

BEST BUY US Robotics' Wireless MAXg ADSL2+ Gateway is all you need to share an ADSL broadband connection. The built-in modem supports the new ADSL2+ standard, so it will work with connections up to 24Mbit/s. It achieved a throughput of 24.58Mbit/s at 10m using a MAXg network adaptor. It also works well with standard WiFi adaptors, achieving a throughput of 17.94Mbit/s using a Centrino notebook.

MAXg technology is designed to improve speed and throughput. It works within the 802.11g specification, unlike MIMO routers, so it won't be obsolete soon.

802.11G WIRELESS ROUTER 125Mbit/s turbo mode, ADSL2+ modem, four Ethernet ports PART CODE USR019108 SUPPLIER www.nickknows.com DETAILS www.usrobotics.com ✓ Fast wireless ✗ Range not as good as MIMO routers FULL REVIEW Apr 2006





VIOLET Nabaztag

★★★★★
£80 inc VAT

The Nabaztag stands just over half-a-foot tall, has rotating ears and is the world's first WiFi rabbit. Once he's connected to your wireless network, he'll read the time, tell you the weather, play music and receive messages. Nabaztag is a stunning-looking bit of kit that had the whole *Shopper* team crowding round to see him spring to life and say his first words. Unfortunately, it took a while to get working.

While the rabbit will connect to any unprotected wireless network automatically, it can't do the same for protected networks. Instead, we had to put it into configuration mode, where it acts as a wireless access point, and change our settings manually using the web interface. But Nabaztag supports only WEP-encrypted networks, so you'll have to downgrade your security if you're currently using WPA. Once he's working, he should connect to the online service, but he can often be slow and take a couple of tries to connect.

Once connected, he has to be registered online and given a unique name. As Nabaztag is a French product, large parts of the website are still in French, which can make it difficult to understand some of the prompts, such as when it tries to tell you that someone else already has the name you want to use. When your Nabaztag is online, he's ready to send and receive messages. It's free to send and receive 'little words', which are pre-recorded messages such as: "Can you do the shopping please?" These can be sent to any Nabaztag, including your own.

If you want to send music files or use text-to-speech to generate your own messages, you're given a few free credits with each account. To get the full service, you have to upgrade your account. The Full Rabbit costs €3.9 (around £3) per month and lets you send unlimited messages to other accounts. The Full Friend Rabbit costs €5.9 (approximately £4) per month, but enables friends who don't have Nabaztags to send your rabbit an unlimited number of messages.

The messaging service works well, and there's a large range of voices you can pick. However, the Nabaztag isn't very loud, so it can be difficult to hear a message. With each message you send, you can choose the colour the Nabaztag should glow when it's received. If you're out when you receive a message, your rabbit's nose glows to show that you've got messages. You can replay all your messages by pressing the rabbit's only button. If you want finer control, your Nabaztag home page lets you read, delete and archive your messages just like email.

Unfortunately, at times we found the website very slow to use and sending messages could take a while. As the service grows to include more users, Violet will have to upgrade its servers to speed things up.

Sending music using a choice of Midi files or your own MP3 files is great fun; your rabbit springs to life with a colourful light show and spins his ears. If you want to, you can share your music collection



online with other Nabaztag users. Don't forget, though, that it's illegal to share copyrighted music using this service.

There's also a wide range of services to which you can subscribe. If you haven't signed up for a paid account, you're limited to the free services. These include the clock; every hour on the hour, your Nabaztag will proudly tell you the time. Just don't forget to tell him he's in the UK; otherwise, your bunny will think he's on French time.

Other free services include Tai Chi, a twice-daily weather report and moods, where your rabbit will say something random based on his mood. Some services need updating as they are only of use to you if you live in France, such as the Paris traffic reports.

If you upgrade your account, you can get Nabaztag to check your POP3 or IMAP email accounts and tailor the notification based on who sent the message. You can also be informed when your Google Talk friends come online; it would be good to see support for MSN and AOL instant messengers as well, though.

With all these services, the constant chatter can get a bit much. If you find that to be the case, you can turn off the Nabaztag's speaker. If you prefer, you can set your rabbit's sleeping times and have him wake you up by playing your favourite MP3 file. Furthermore, his ears can be removed and replaced with new ear packs. As they connect with magnets, it's an easy job to do.

Finally, you can marry your rabbit to another one anywhere in the world; when you move your rabbit's ears, its partner's ears move to the same position and vice versa.

When it works, this is a slick, cute novelty item. It didn't get on our nerves despite running constantly for a couple of weeks. The Nabaztag can easily have new features and services added to it through

the web. That said, there are a few teething problems, and the manufacturers need to fully translate the web page into English and improve the site's speed. Even with these little problems and a slightly tricky wireless setup, we adored our Nabaztag, and it's sure to get better over time.

David Ludlow

SUMMARY

- ✓ Looks brilliant
- ✓ A lot of fun
- ✗ Slow website, partially in French

WIRELESS RABBIT 802.11g WiFi
PART CODE NA-RTL-001
SUPPLIER www.firebox.com
DETAILS www.nabaztag.com

CHOOSING A... Wireless router

Follow the steps to find your ideal specs

WIRELESS SPEED: 802.11g
NUMBER OF NETWORK PORTS: 4
ROUTER: Ethernet
Recommended minimum in grey

1 A basic wireless router with the specifications shown above should cost you around £40 including VAT. It has an Ethernet WAN port, so you'll also need an Ethernet modem. Most cable broadband connections come with one of these, but ADSL connections tend to come with a USB modem instead. If you want to use ADSL, you'll need a router with an ADSL modem built in. This will cost you around £30 more. If you can, buy a router with an ADSL2+ modem, as this will support the faster broadband connections now being rolled out.

2 Think about the devices you want to connect to your wireless network. If it's just a Centrino notebook, you don't need to buy anything else. If you want to connect PCs or notebooks that don't have wireless, you'll need to buy network adaptors for them.

For PCs, buy PCI or USB adaptors. For notebooks, you should buy PC Card adaptors. These should cost around £30. If possible, try to buy your adaptors from the same manufacturer as your router.

3 Consider what you'll be using your wireless network for. If it's just for browsing the internet, a standard 802.11g (54Mbit/s) router is fine. If you want to stream audio and video and share files, you'll need a faster wireless network. Look around for a router with a turbo mode of 108Mbit/s or 125Mbit/s. You must buy your wireless adaptors from the same company to get these throughputs, however.

4 Range is important when choosing a router. If you have a large house or one with thick walls, you'll need a powerful router in order to get a good signal. Routers that are based on MIMO technology offer the best range, but they don't conform to a wireless standard. High-power routers are standard and could be the best way to go.

5 If you want to share a printer on the network, a router with a USB port and print server is a good choice, as all you need to do is connect it up to your printer.